# LARGE SYSTEMS REQUIREMENTS
# IN EUROPE

## (EXECUTIVE SUMMARY)

A CUSTOM STUDY

FOR

NATIONAL ADVANCED SYSTEMS
(EUROPE) CORPORATION

BY
INPUT LIMITED

APRIL 1984

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# INTRODUCTION

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# I INTRODUCTION

- This Executive Summary of Large Systems User Requirements in Europe is an overview of conclusions and recommendations from the research, as a whole. As each of the seven countries studies forms a separate marketplace there are seven volumes of this report wherein each volume contains an Executive Summary unique to that market. The volumes are as follows:

No of [illegible]
the sample
– on-site

| Volume | Number of Pages |
|---|---|
| Austria | 52 |
| Denmark | 37 |
| United Kingdom | 60 |
| Germany | 57 |
| France | 72 |
| Italy | 59 |
| Switzerland | 53 |
| | 390 |

- As part of this overview the Executive Summaries for each volume are included in the Appendix of this report.
- All data and most graphics are included on floppy disk, having been generated by Lotus 1-2-3 software.

# EXECUTIVE SUMMARY

## II EXECUTIVE SUMMARY - OVERVIEW

### A. CONCLUSIONS

(Expand). Actions

- Each separate volume of this report has its own set of conclusions and recommendations. As an overview, this section summarizes the common data base in terms of actual and perceived large systems requirements and loyalty to vendors.
- Exhibits II-1 to II-19 show how NAS ranks in each country in terms of certain key requirements criteria. Also shown is the best and worst of all competitors. Thirdly, the rank in terms of users' importance is indicated in parenthesis. The criteria are in order of importance as indicated by the number of "1" ranks, "2" ranks etc.
- These Exhibits show that for all selected criteria Amdahl is mentioned most often as Best while ICL and Olivetti are mentioned least often as Best. The ratings as Best are as follows with percent mentions in parenthesis:

| | | |
|---|---|---|
| - | Amdahl | 33% |
| - | IBM | 24% |
| - | NAS | 20% |
| - | Siemens | 11% |
| - | BASF | 10% |
| - | ICL | 1% |
| - | Olivetti | 1% |

- For all selected criteria IBM was most often cited as Worst and Olivetti was least often selected as Worst. The Worst ratings are as follows:

| | | |
|---|---|---|
| - | IBM | 29% |
| - | Siemens | 17% |
| - | Amdahl | 14% |
| - | NAS | 14% |
| - | ICL | 14% |
| - | BASF | 11% |
| - | Olivetti | 1% |

- The most important criteria include:
  - Reliability
  - Availability
  - Hardware Support
  - Compatability
  - Price/Performance
  - Performance
  - Service Organisation
  - Support Personnel

- For these most important criteria Amdahl received most Best mentions and Siemens received the least:

| | |
|---|---|
| Amdahl | 40% |
| NAS | 24% |
| BASF | 15% |
| IBM | 11% |
| Siemens | 10% |

- Most mentions for Worst in the most important criteria were:

| | |
|---|---|
| IBM | 34% |
| Siemens | 20% |
| ICL | 18% |
| Amdahl | 12% |
| BASF | 11% |
| NAS | 5% |

- The least important criteria include:
  - Entertainment
  - Product Range
  - Advertising
  - Salesmen

- Most mentions as Best in the least important criteria are:

| | |
|---|---|
| IBM | 33% |
| Amdahl | 29% |
| NAS | 19% |
| Siemens | 16% |
| ICL | 3% |

o Most mentions as Worst in least important criteria are:

| | |
|---|---|
| NAS | 21% |
| IBM | 21% |
| BASF | 21% |
| Siemens | 19% |
| Amdahl | 14% |
| Olivetti | 4% |

o IBM and Siemens shared the most number of Best mentions (2) for Loyalty and IBM also received the most mentions (3) for Worst loyalty (users vis a vis IBM).

o Perception of large systems and plug compatible vendors were drawn from users and non users alike. Actual ratings of selective purchasing criteria were produced by users having experience with the equipment in question. Exhibits 11-20 to 11-26 show a comparison of actual versus perceived rankings Best and Worst and NAS.

o Criteria included in the measure for perception were:

- Performance
- Price
- Product Range
- Reliability
- Image
- Marketing Strength
- Personnel

o IBM dominates users perceptions for these criteria, as indicated by the percent of Best mentions:

| | |
|---|---|
| IBM | 80% |
| NAS | 10% |
| Siemens | 6% |
| Amdahl | 2% |
| Olivetti | 2% |

o Perceptions, in terms of most often mentioned as Worst included:

| | |
|---|---|
| Amdahl | 32% |
| BASF | 24% |

| | |
|---|---|
| NAS | 16% |
| Olivetti | 14% |
| Siemens | 12% |
| IBM | 2% |

- Comparing NAS Actual ratings (NAS users) to Perceptive ratings (NAS plus non-NAS users) in 31% (14) of the cases NAS actual rating is less than its perceived rating whereas in 69% (31) of the cases NAS actual status exceeds its perceived status.
  - In only 2 criteria did NAS actual fall below the ranking of its perceived status. These included:

| | |
|---|---|
| Product range | 4/2 |
| Image | 4/2 |

  - Actual ranking equal to or above perceived rankings were:

| | |
|---|---|
| Performance | 5/2 |
| Price | 1/6 |
| Reliability | 1/5 |
| Marketing Strength | 1/6 |
| Personnel | 1/5 |

- Countries where actual rankings were less than perceptions were:

| | |
|---|---|
| U.K. | 4/3 |
| France | 4/3 |
| Denmark | 4/2 |

- Countries where actual rankings equalled or exceeded perceived rankings included:

| | |
|---|---|
| Germany | 2/5 |
| Italy | 2/5 |
| Austria | 3/4 |

- In Switzerland there were 2 cases each where actual was less than and equalled or exceeded perceived rankings.
- From these data, major differences occur by country in terms of:

- Differences in importance of purchasing requirements or criteria. For example -
  - Reliability is clearly most important
  - Availability is second overall but ranks 6th in the U.K. and France and 7th in Italy
  - Advertising and entertainment are least important
- Differences in perceived capabilities vis a vis actual rankings, for example as noted above.
- Differences in perceptions of vendors, as noted above.

## B. RECOMMENDATIONS

- o In addition to the recommendations in each of the countries studies (see volumes 1-7), NAS should capitalise on its user base who rate NAS relatively higher than non users rate NAS. A reference selling program is suggested.
- o Where perceptions are above actual rankings NAS needs to closely communicate with users to determined the nature of the discrepancy. A customer satisfaction survey is recommended.
- o From data and analysis contained in this and other study volumes, NAS should extract the essential strong points and weaknesses as well and market these internally and externally in conjunction with its overall goals, strategies operating and long range plan.

Rahil

## EXHIBIT II-1

### Actual Ratings For NAS:

### RELIABILITY

| | Best of All | Worst of All | Better Than Amdahl | Better Than BASF | Better Than IBM | Better Than ICL | Better Than Olivetti | Better Than Siemens | Better Than Target |
|---|---|---|---|---|---|---|---|---|---|
| 1. United Kingdom (2)* | Amdahl | ICL | | N/A | X | X | N/A | N/A | |
| 2. Germany (1)* | BASF | Siemens | X | | X | | N/A | X | |
| 3. France (2)* | Siemens | Amdahl/IBM | X | | X | N/A | N/A | | |
| 4. Italy (1)* | Amdahl | Siemens | | N/A | | N/A | N/A | | |
| 5. Austria (1)* | BASF | IBM | N/A | | X | N/A | N/A | | |
| 6. Switzerland (1)* | Amdahl | NAS | | N/A | | N/A | N/A | N/A | |
| 7. Denmark (-)* | | | | N/A | | N/A | N/A | N/A | |

*( ) Rank in degree of importance

## EXHIBIT II-2

## Actual Ratings For NAS:

## AVAILABILITY

| | Best of All | Worst of All | Better Than Amdahl | Better Than BASF | Better Than IBM | Better Than ICL | Better Than Olivetti | Better Than Siemens | Better Than Target |
|---|---|---|---|---|---|---|---|---|---|
| 1. United Kingdom (6)* | NAS/ Amdahl | ICL | | N/A | X | X | N/A | N/A | |
| 2. Germany (5)* | NAS | BAS | X | X | X | N/A | N/A | X | X |
| 3. France (6)* | Siemens | IBM | | | X | N/A | N/A | | |
| 4. Italy (7)* | Amdahl | Siemens | | N/A | X | N/A | X | X | X |
| 5. Austria (1)* | BASF | IBM | N/A | | X | N/A | N/A | | |
| 6. Switzerland (1)* | Amdahl | NAS | | N/A | | N/A | N/A | N/A | |
| 7. Denmark (-)* | NAS | Amdahl | X | N/A | X | N/A | N/A | N/A | |

*( ) Rank in degree of importance

## EXHIBIT II-3

### Actual Ratings For NAS:

### HARDWARE SUPPORT

| | Best of All | Worst of All | Better Than Amdahl | Better Than BASF | Better Than IBM | Better Than ICL | Better Than Olivetti | Better Than Siemens | Better Than Target |
|---|---|---|---|---|---|---|---|---|---|
| 1. United Kingdom (1)* | NAS | ICL | X | N/A | X | X | N/AN/A | | |
| 2. Germany (16)* | Amdahl | Siemens | | | | | N/A | X | X |
| 3. France (1)* | NAS | IBM | X | X | X | N/A | N/A | X | X |
| 4. Italy (5)* | Amdahl | Siemens | | N/A | | N/A | X | X | |
| 5. Austria (26)* | Siemens | BASF | N/A | X | X | N/A | N/A | | |
| 6. Switzerland (29)* | Amdahl | IBM | | N/A | | N/A | N/A | N/A | |
| 7. Denmark (1)* | NAS | Amdahl | X | N/A | X | N/A | N/A | N/A | |

*( ) Rank in degree of importance

## EXHIBIT II-4

## Actual Ratings For NAS:

## COMPATIBILITY

| | Best of All | Worst of All | Better Than Amdahl | Better Than BASF | Better Than IBM | Better Than ICL | Better Than Olivetti | Better Than Siemens | Better Than Target |
|---|---|---|---|---|---|---|---|---|---|
| 1. United Kingdom (5)* | IBM | ICL | X | N/A | | X | N/A | N/A | X |
| 2. Germany (2)* | BASF | Siemens | | | X | | N/A | X | X |
| 3. France (5)* | IBM | BASF | | X | | N/A | N/A | X | |
| 4. Italy (4)* | Amdahl/ Siemens | IB, | | N/A | X | N/A | X | | X |
| 5. Austria (1)* | BASF | Siemens | N/A | | X | N/A | N/A | X | |
| 6. Switzerland (5)* | NAS/ Amdahl | IBM | | N/A | X | N/A | N/A | N/A | X |
| 7. Denmark (7)* | IBM | Amdahl | X | N/A | | N/A | N/A | N/A | |

*( ) Rank in degree of importance

# EXHIBIT II-5

## Actual Ratings For NAS:

## PRICE/PERFORMANCE

| | Best of All | Worst of All | Better Than Amdahl | Better Than BASF | Better Than IBM | Better Than ICL | Better Than Olivetti | Better Than Siemens | Better Than Target |
|---|---|---|---|---|---|---|---|---|---|
| 1. United Kingdom (12)* | Amdahl | ICL | | N/A | X | X | N/A | N/A | X |
| 2. Germany (7)* | BASF/<br>NAS/<br>Amdahl | IBM | | | X | | N/A | X | X |
| 3. France (12)* | Siemens | ICL | | X | X | X | N/A | | |
| 4. Italy (2)* | Amdahl | IBM | | N/A | X | N/A | | X | |
| 5. Austria (12)* | BASF/NAS | IBM | N/A | | X | N/A | N/A | X | X |
| 6. Switzerland (12)* | Amdahl | IBM | | N/A | X | N/A | N/A | N/A | X |
| 7. Denmark (4)* | NAS | IBM | X | N/A | X | N/A | N/A | N/A | X |

*( ) Rank in degree of importance

## EXHIBIT II-6

## Actual Ratings For NAS:

## PERFORMANCE

| | Best of All | Worst of All | Better Than Amdahl | Better Than BASF | Better Than IBM | Better Than ICL | Better Than Olivetti | Better Than Siemens | Better Than Target |
|---|---|---|---|---|---|---|---|---|---|
| 1. United Kingdom (13)* | Amdahl | ICL | | N/A | X | X | N/A | N/A | X |
| 2. Germany (6)* | BASF | Siemens | X | | X | N/A | N/A | X | X |
| 3. France (12)* | NAS | ICL | X | X | X | X | N/A | X | |
| 4. Italy (2)* | Amdahl | IBM | | N/A | X | N/A | | X | |
| 5. Austria (22)* | NAS | IBM | N/A | X | X | N/A | N/A | X | X |
| 6. Switzerland (6)* | IBM | NAS | | N/A | | N/A | N/A | N/A | |
| 7. Denmark (5)* | IBM | Amdahl | X | N/A | | N/A | N/A | N/A | |

*( ) Rank in degree of importance

## EXHIBIT II-7

### Actual Ratings For NAS:

### SERVICE ORGANISATION

| | Best of All | Worst of All | Better Than Amdahl | Better Than BASF | Better Than IBM | Better Than ICL | Better Than Olivetti | Better Than Siemens | Better Than Target |
|---|---|---|---|---|---|---|---|---|---|
| 1. United Kingdom (4)* | Amdahl | ICL | | N/A | | X | N/A | N/A | |
| 2. Germany (3)* | Amdahl | Siemens | | X | X | | N/A | X | |
| 3. France (3)* | Amdahl | BASF | | X | | N/A | N/A | | |
| 4. Italy (10)* | NAS | Siemens | X | N/A | X | N/A | X | X | X |
| 5. Austria (12)* | Siemens | NAS | N/A | | | N/A | N/A | | |
| 6. Switzerland (18)* | IBM | Amdahl | | N/A | | N/A | N/A | N/A | |
| 7. Denmark (2)* | NAS | Amdahl | X | N/A | X | N/A | N/A | N/A | |

*( ) Rank in degree of importance

## EXHIBIT II-8

## Actual Ratings For NAS:

## SUPPORT PERSONNEL

| | Best of All | Worst of All | Better Than Amdahl | Better Than BASF | Better Than IBM | Better Than ICL | Better Than Olivetti | Better Than Siemens | Better Than Target |
|---|---|---|---|---|---|---|---|---|---|
| 1. United Kingdom (26)* | Amdahl | ICL | | N/A | | X | N/A | N/A | |
| 2. Germany (12)* | Amdahl | BASF/ Siemens | | X | X | | N/A | X | X |
| 3. France (27)* | IBM | BASF | | X | | N/A | N/A | X | |
| 4. Italy (10)* | Amdahl | IBM | | N/A | X | N/A | X | | X |
| 5. Austria (7)* | BASF | IBM | N/A | | X | N/A | N/A | X | |
| 6. Switzerland (8)* | Amdahl | IBM | | N/A | | N/A | N/A | N/A | |
| 7. Denmark (3)* | NAS | IBM | X | N/A | X | N/A | N/A | N/A | X |

*( ) Rank in degree of importance

# EXHIBIT II-9

## Actual Ratings For NAS:

## CREDIBILITY

| | Best of All | Worst of All | Better Than Amdahl | Better Than BASF | Better Than IBM | Better Than ICL | Better Than Olivetti | Better Than Siemens | Better Than Target |
|---|---|---|---|---|---|---|---|---|---|
| 1. United Kingdom (14)* | NAS | ICL | X | N/A | X | X | N/A | N/A | X |
| 2. Germany (13)* | BASF | Siemens | X | | | | N/A | X | X |
| 3. France (14)* | Amdahl | Siemens | | | | N/A | N/A | X | |
| 4. Italy (9)* | Amdahl | IBM | | N/A | X | N/A | X | | X |
| 5. Austria (10)* | NAS/ Siemens | IBM | N/A | X | X | N/A | N/A | | X |
| 6. Switzerland (4)* | Amdahl | IBM | | N/A | | N/A | N/A | N/A | |
| 7. Denmark (10)* | IBM | NAS | | N/A | | N/A | N/A | N/A | |

*( ) Rank in degree of importance

## EXHIBIT II-10

### Actual Ratings For NAS:

### STABILITY

| | Best of All | Worst of All | Better Than Amdahl | Better Than BASF | Better Than IBM | Better Than ICL | Better Than Olivetti | Better Than Siemens | Better Than Target |
|---|---|---|---|---|---|---|---|---|---|
| 1. United Kingdom (10)* | IBM | ICL | | N/A | | X | N/A | N/A | |
| 2. Germany (19)* | IBM | Amdahl | X | | | N/A | N/A | X | X |
| 3. France (10)* | IBM | BASF | | X | | N/A | N/A | | |
| 4. Italy (26)* | IBM | Siemens | X | N/A | | N/A | X | X | X |
| 5. Austria (19)* | Siemens | NAS | N/A | | | N/A | N/A | N/A | |
| 6. Switzerland (19)* | IBM | Amdahl | | N/A | | N/A | N/A | N/A | |
| 7. Denmark (6)* | IBM | NAS | | N/A | | N/A | N/A | N/A | |

*( ) Rank in degree of importance

# EXHIBIT II-11

## Actual Ratings For NAS:

## PRICE

| | Best of All | Worst of All | Better Than Amdahl | Better Than BASF | Better Than IBM | Better Than ICL | Better Than Olivetti | Better Than Siemens | Better Than Target |
|---|---|---|---|---|---|---|---|---|---|
| 1. United Kingdom (17)* | Amdahl | ICL | | N/A | X | X | N/A | N/A | |
| 2. Germany (16)* | Amdahl/ BASF | IBM | X | | X | | N/A | X | X |
| 3. France (16)* | Siemens | ICL | X | X | X | X | N/A | | |
| 4. Italy (7)* | Amdahl | Siemens | | N/A | X | N/A | X | X | X |
| 5. Austria (10)* | BASF | IBM | N/A | | X | N/A | N/A | X | |
| 6. Switzerland (20)* | Amdahl | IBM | | N/A | X | N/A | N/A | N/A | X |
| 7. Denmark (8)* | NAS | IBM | X | N/A | X | N/A | N/A | N/A | |

*( ) Rank in degree of importance

## EXHIBIT II-12

### Actual Ratings For NAS:

### FINANCIAL CONDITION

| | Best of All | Worst of All | Better Than Amdahl | Better Than BASF | Better Than IBM | Better Than ICL | Better Than Olivetti | Better Than Siemens | Better Than Target |
|---|---|---|---|---|---|---|---|---|---|
| 1. United Kingdom (21)* | IBM | ICL | | N/A | | X | N/A | N/A | |
| 2. Germany (24)* | IBM | Amdahl | X | | | | N/A | | X |
| 3. France (21)* | Amdahl | IBM | | | X | N/A | N/A | | X |
| 4. Italy (28)* | IBM | Siemens | | N/A | | N/A | X | X | X |
| 5. Austria (23)* | Siemens | NAS | N/A | | | N/A | N/A | | |
| 6. Switzerland (23)* | IBM | Amdahl | | N/A | | N/A | N/A | N/A | |
| 7. Denmark (8)* | IBM | Amdahl | X | N/A | | N/A | N/A | N/A | |

*( ) Rank in degree of importance

## EXHIBIT II-13

Actual Ratings For NAS:

EXECUTIVE RELATIONSHIPS

| | Best of All | Worst of All | Better Than Amdahl | Better Than BASF | Better Than IBM | Better Than ICL | Better Than Olivetti | Better Than Siemens | Better Than Target |
|---|---|---|---|---|---|---|---|---|---|
| 1. United Kingdom (24)* | NAS | Amdahl | X | N/A | X | X | N/A | N/A | X |
| 2. Germany (14)* | Amdahl/ BASF | Siemens | | | X | N/A | N/A | X | X |
| 3. France (24)* | Amdahl | BASF | | X | | N/A | N/A | X | |
| 4. Italy (14)* | Olivetti | IBM | | N/A | X | N/A | | | X |
| 5. Austria (12)* | NAS | IBM | N/A | X | X | N/A | N/A | X | X |
| 6. Switzerland (17)* | NAS/ Amdahl | IBM | | N/A | X | N/A | N/A | N/A | X |
| 7. Denmark (12)* | NAS | IBM | X | N/A | X | N/A | N/A | N/A | X |

*( ) Rank in degree of importance

### EXHIBIT II-14

### Actual Ratings For NAS:

### IMAGE

| | Best of All | Worst of All | Better Than Amdahl | Better Than BASF | Better Than IBM | Better Than ICL | Better Than Olivetti | Better Than Siemens | Better Than Target |
|---|---|---|---|---|---|---|---|---|---|
| 1. United Kingdom (21)* | Amdahl | ICL | | N/A | | X | N/A | N/A | X |
| 2. Germany (22)* | IBM | NAS | | | | | N/A | | |
| 3. France (21)* | IBM | NAS | | | | N/A | N/A | | |
| 4. Italy (21)* | Amdahl | NAS | | N/A | | N/A | | | X |
| 5. Austria (19)* | Siemens | IBM | N/A | X | X | N/A | N/A | | X |
| 6. Switzerland (21)* | IBM | Amdahl | | N/A | | N/A | N/A | N/A | |
| 7. Denmark (13)* | IBM | NAS | | N/A | | N/A | N/A | N/A | |

*( ) Rank in degree of importance

## EXHIBIT II-15

### Actual Ratings For NAS:

### SALEMEN

| | Best of All | Worst of All | Better Than Amdahl | Better Than BASF | Better Than IBM | Better Than ICL | Better Than Olivetti | Better Than Siemens | Better Than Target |
|---|---|---|---|---|---|---|---|---|---|
| 1. United Kingdom (19)* | Amdahl | ICL | | N/A | | X | N/A | N/A | |
| 2. Germany (16)* | NAS | Amdahl | X | X | X | N/A | N/A | X | X |
| 3. France (19)* | Siemens | BASF | | X | | N/A | N/A | | |
| 4. Italy (21)* | Amdahl | IBM | | N/A | X | N/A | | | X |
| 5. Austria (12)* | NAS | IBM | N/A | X | X | N/A | N/A | X | X |
| 6. Switzerland (11)* | NAS | Amdahl/<br>IBM | X | N/A | X | N/A | N/A | N/A | X |
| 7. Denmark (14)* | Amdahl | NAS | | N/A | | N/A | N/A | N/A | |

*( ) Rank in degree of importance

## EXHIBIT II-16

## Actual Ratings For NAS:

## PRODUCT RANGE

| | Best of All | Worst of All | Better Than Amdahl | Better Than BASF | Better Than IBM | Better Than ICL | Better Than Olivetti | Better Than Siemens | Better Than Target |
|---|---|---|---|---|---|---|---|---|---|
| 1. United Kingdom (18)* | IBM | NAS | | N/A | | | N/A | N/A | |
| 2. Germany (30)* | Siemens | Amdahl | X | X | | N/A | N/A | | X |
| 3. France (18)* | IBM | Siemens | | | | N/A | N/A | X | |
| 4. Italy (17)* | IBM | BASF | N/A | X | | N/A | X | X | X |
| 5. Austria (30)* | IBM | BASF | N/A | X | | N/A | N/A | | |
| 6. Switzerland (33)* | Amdahl | IBM | | N/A | | N/A | N/A | N/A | |
| 7. Denmark (14)* | IBM | NAS | | N/A | | N/A | N/A | N/A | |

*( ) Rank in degree of importance

## EXHIBIT II-17

## Actual Ratings For NAS:

## ADVERTISING

| | Best of All | Worst of All | Better Than Amdahl | Better Than BASF | Better Than IBM | Better Than ICL | Better Than Olivetti | Better Than Siemens | Better Than Target |
|---|---|---|---|---|---|---|---|---|---|
| 1. United Kingdom (34)* | Amdahl | NAS | | N/A | | | N/A | N/A | X |
| 2. Germany (29)* | Siemens | BASF | X | X | | | N/A | | X |
| 3. France (34)* | IBM | Siemens | X | X | | N/A | N/A | X | X |
| 4. Italy (31)* | Amdahl | Olivetti | | N/A | | N/A | X | | X |
| 5. Austria (30)* | Siemens | BASF | N/A | X | | N/A | N/A | | |
| 6. Switzerland (25)* | IBM | Amdahl | | N/A | | N/A | N/A | N/A | |
| 7. Denmark (17)* | IBM | NAS | | N/A | | N/A | N/A | N/A | |

*( ) Rank in degree of importance

## EXHIBIT II-18

## Actual Ratings For NAS:

## ENTERTAINING

| | Best of All | Worst of All | Better Than Amdahl | Better Than BASF | Better Than IBM | Better Than ICL | Better Than Olivetti | Better Than Siemens | Better Than Target |
|---|---|---|---|---|---|---|---|---|---|
| 1. United Kingdom (36)* | ICL | IBM | | N/A | X | | N/A | N/A | X |
| 2. Germany (26)* | NAS | BASF | X | X | X | N/A | N/A | X | X |
| 3. France (36)* | Amdahl | Siemens | | X | | N/A | N/A | X | X |
| 4. Italy (33)* | IBM/NAS | Siemens | | N/A | | N/A | X | X | X |
| 5. Austria (32)* | IBM/NAS/ Siemens | BASF | N/A | X | | N/A | N/A | N/A | |
| 6. Switzerland (25)* | Amdahl | NAS | | N/A | | N/A | N/A | N/A | |
| 7. Denmark (18)* | Amdahl | IBM | | N/A | X | N/A | N/A | N/A | X |

*( ) Rank in degree of importance

## EXHIBIT II-19

### Actual Ratings For NAS:

### LOYALTY

| | Best of All | Worst of All | Better Than Amdahl | Better Than BASF | Better Than IBM | Better Than ICL | Better Than Olivetti | Better Than Siemens | Better Than Target |
|---|---|---|---|---|---|---|---|---|---|
| 1. United Kingdom | Amdahl | IBM | | N/A | X | | N/A | N/A | |
| 2. Germany | IBM | Amdahl/<br>BASF | X | X | | N/A | X | | |
| 3. France | BASF | Siemens | | | X | N/A | N/A | X | |
| 4. Italy | Siemens | Olivetti | | N/A | | N/A | X | | |
| 5. Austria | Siemens | IBM | N/A | X | X | N/A | N/A | | |
| 6. Switzerland | IBM | | | N/A | | N/A | N/A | N/A | |
| 7. Denmark | NAS | IBM | X | N/A | X | N/A | N/A | N/A | |

*( ) Rank in degree of importance

# EXHIBIT II-20

## PERFORMANCE

| | ALL VENDORS | | | | NAS: | |
|---|---|---|---|---|---|---|
| | Actual | | Perception | | Actual | Actual |
| | Best | Worst | Best | Worst | < Perception | > Perception |
| United Kingdom | Amdahl | ICL | IBM | BASF | | X |
| Germany | BASF | Siemens | Siemens | NAS | | X |
| France | NAS | ICL | IBM | Olivetti | | X |
| Italy | Amdahl | IBM | IBM | Amdahl | | X |
| Austria | NAS | IBM | IBM | Amdahl | | X |
| Switzerland | IBM | NAS | IBM | Siemens | X | |
| Denmark | IBM | Amdahl | NAS | Amdahl | X | |

## EXHIBIT II-21

### PRICE

| | ALL VENDORS | | | | NAS: | |
|---|---|---|---|---|---|---|
| | Actual | | Perception | | Actual | Actual |
| | Best | Worst | Best | Worst | < Perception | > Perception |
| United Kingdom | Amdahl | ICL | NAS | BASF | X | |
| Germany | Amdahl/ BASF | IBM | Siemens | NAS | | X |
| France | Siemens | ICL | Amdahl | Olivetti | | X |
| Italy | Amdahl | Siemens | Olivetti | Amdahl | | X |
| Austria | BASF | IBM | IBM | NAS | | X |
| Switzerland | Amdahl | IBM | IBM | Siemens | | X |
| Denmark | NAS | IBM | NAS | IBM | | X |

## EXHIBIT II-22

## PRODUCT RANGE

| | ALL VENDORS | | | | NAS: | |
|---|---|---|---|---|---|---|
| | Actual | | Perception | | Actual < Perception | Actual > Perception |
| | Best | Worst | Best | Worst | | |
| United Kingdom | IBM | NAS | IBM | BASF | X | |
| Germany | Siemens | Amdahl | IBM | BASF | | X |
| France | IBM | Siemens | IBM | Olivetti | X | |
| Italy | IBM | Siemens | IBM | Amdahl | | X |
| Austria | IBM | BASF | IBM | Amdahl | X | |
| Switzerland | Amdahl | IBM | IBM | BASF | | |
| Denmark | IBM | NAS | IBM | Amdahl | X | |

## EXHIBIT II-23

## RELIABILITY

| | ALL VENDORS | | | | NAS: | |
|---|---|---|---|---|---|---|
| | Actual | | Perception | | Actual | Actual |
| | Best | Worst | Best | Worst | < Perception | > Perception |
| United Kingdom | Amdahl | ICL | IBM | BASF | | X |
| Germany | BASF | Siemens | IBM | BASF | | X |
| France | Siemens | Amdahl/<br>IBM | IBM | Olivetti | X | |
| Italy | Amdahl | Siemens | IBM | Amdahl | | X |
| Austria | BASF | IBM | IBM | amdahl | | X |
| Switzerland | Amdahl | NAS | Siemens | NAS | | X |
| Denmark | | | NAS | Amdahl | | |

## EXHIBIT II-24

## IMAGE

| | ALL VENDORS | | | | NAS: | |
|---|---|---|---|---|---|---|
| | Actual | | Perception | | Actual | Actual |
| | Best | Worst | Best | Worst | < Perception | > Perception |
| United Kingdom | Amdahl | ICL | IBM | BASF | X | |
| Germany | IBM | NAS | IBM | BASF | X | |
| France | IBM | NAS | IBM | Olivetti | X | |
| Italy | Amdahl | NAS | IBM | Amdahl | X | |
| Austria | Siemens | IBM | IBM | NAS | | X |
| Switzerland | IBM | Amdahl | IBM | Siemens | | |
| Denmark | IBM | NAS | IBM | NAS | | X |

## EXHIBIT II-25

### MARKETING STRENGTH*

| | ALL VENDORS | | | | NAS: | |
|---|---|---|---|---|---|---|
| | Actual | | Perception | | Actual | Actual |
| | Best | Worst | Best | Worst | < Perception | > Perception |
| United Kingdom | Amdahl | ICL | IBM | BASF | | X |
| Germany | NAS | Amdahl | IBM | BASF | | X |
| France | Siemens | BASF | IBM | Olivetti | | X |
| Italy | Amdahl | IBM | IBM | Amdahl | | X |
| Austria | NAS | IBM | IBM | Amdahl | | X |
| Switzerland | NAS | IBM/<br>Amdahl | IBM | Siemens | | X |
| Denmark | Amdahl | NAS | IBM | Amdahl | X | |

* Expressed as rating for salesment for actual

## EXHIBIT II-26

## PERSONNEL*

| | ALL VENDORS | | | | NAS: | |
|---|---|---|---|---|---|---|
| | Actual | | Perception | | Actual | Actual |
| | Best | Worst | Best | Worst | < Perception | > Perception |
| United Kingdom | Amdahl | ICL | IBM | BASF | X | |
| Germany | Amdahl | Siemens | IBM | NAS | | X |
| France | IBM | BASF | IBM | Olivetti | | X |
| Italy | Amdahl | IBM | IBM | Amdahl | | X |
| Austria | BASF | IBM | IBM | NAS | | X |
| Switzerland | Amdahl | IBM | IBM | Siemens | | |
| Denmark | NAS | IBM | IBM/NAS | Amdahl | | X |

* Expressed as rating for support personnel for actual

# APPENDIX

# APPENDIX 1: Executive Summary - U.K.

# II. EXECUTIVE SUMMARY

## A. KEY CONCLUSIONS

- NAS is highly regarded in the UK large systems marketplace, as shown in Exhibit II-1, being regarded best of all (ICL, IBM and Amdahl) in 15% of 25 of the most significant procurement parameters.

  - NAS was also rated better than:

    - IBM in 38% of the parameters
    - Amdahl in 35% of the parameters
    - ICL in 85% of the parameters
    - Users' ratings of importance in 37% of the factors.

  - Performance ratings were applied by specific users of that equipment e.g. IBM users rated IBM only on performance whereas perceptions, all users were free to rate all vendors.

- NAS is perceived to be better by all users than by only NAS users in Price.

- Loyalty by users is generally good but they like to consider others' products for the sake of comparison. There is not a strong trend towards either product or company loyalty applications. About half of the respondents tend to be loyal to the product and the other half tend to be loyal to the company.

- Twelve out of 23 responses indicated a willingness to change large systems vendors, for various reasons including:

  - 'Putting the pressure' on IBM
  - If better costs were resulted
  - As long as reliability, availabilty could

## EXHIBIT II-1

## NAS:

| | Best Of All | Worst Of All | Better Than IBM | Better Than Amadhl | Better Than ICL | Better Than Target |
|---|---|---|---|---|---|---|
| PERFORMANCE | | | | | | |
| Loyalty | | | X | | | |
| Price | | | | X | X | X |
| Reliability | | | X | | X | X |
| Performance | | | X | | X | |
| Price/Performance | | | X | | X | |
| Availability | | | X | | X | |
| Compataibility | | | | X | X | X |
| Hardware Support | X | | X | X | X | |
| Service Organisation | | | | | X | |
| Stability | | | | | X | |
| Financial Condition | | | | | X | |
| Support Personnel | | | | | X | |
| Credibility | X | | X | X | X | X |
| Executive Relationships | X | | X | X | X | X |
| Salesmen | | | | | X | |
| Image | | | | | X | X |
| Advertising | | X | | | | |
| Entertaining | | | X | | | |
| Product Range | X | | | | | |
| PERCEPTION | | | | | | |
| Reliability | | | | X | X | N/A |
| Price | X | | X | X | X | N/A |
| Performance | | | | | X | N/A |
| Product Range | | | | | X | N/A |
| Image | | | | X | X | N/A |
| Marketing Strength | | | | | X | N/A |
| Personnel | | | | X | X | N/A |
| Percent | 15% | 8% | 38% | 35% | 85% | 37% |

be improved and compatibility with the existing systems sustained.

- The other 11 responses were negative about trying new large systems vendors owing, primarily, to the fact that they are afraid to change. That is the risks of such might be larger than the rewards.

- Pleasing aspects of NAS as a company and its products included the professional and confident nature of business relationships and a reliable product.

  - IBM users were mainly pleased with the support they receive from IBM

- Irritating features of NAS included a lone mention of a "love 'em and leave 'em" attitude, indicating an absence of the salesman or company once the sale has been made.

  - IBM received more defined complaints concerning its:

    - Bureaucracy
    - Inflexibility
    - Slowness
    - Lack of software support

- Candid remarks from respondents concerning what it would take to be sold and consideration of changing vendors are summarized in Exhibit II-2 and II-3 respectively.

## B. RECOMMENDATIONS

- Based upon users commentary, ratings and perceptions, NAS should organise an implement a major selling compaign against ICL.

  - NAS should capitalise on its real and perceived strengths:

## EXHIBIT II-2

### "What Would It Take For Your Company To Be Sold On Another Vendor?"

- "Proof of compatibility with installed base, trivial impact on development, development program and no impact on availability plus installed price advantage."
  - IBM User

- "Technical excellence, good company profile, excellent backup, availability of equipment and software; telecommunications is essential (x25) well established products.."
  - ICL User

- "Compatibility with current equipment and operating software and to demonstrate that that compatibility would continue to exist."
  - IBM User

- "Would need to demonstrate their ability to supply a compatible, reliable product with superior cost performace, with the ability to support it throughout its installed life from a stable, fast-response product support organisation, and offer follow-on products to match changing requirements and improving technology."
  - IBM User

- "Another IBM in the marketplace." - IBM user

## EXHIBIT II-3

"Would You Consider Buying Any Future Requirements From Any Of These Firms?
(Amdahl, BASF, IBM, ICL, NAS)...."

- "Amdahl considered to be a feasible alternative to IBM for CPU/memory. BASF considered to be a feasible alternative to IBM for peripherals (e.g. disk drive)."

  - IBM User

- "Yes, if presented correctly and meeting all our needs on price, reliability."

  - IBM and NAS User

- "Yes. Being on IBM site, a move towards non-IBM suppliers is likely to take place."

  - IBM Users

- "Yes - Why not?"

  - IBM and Amdahl User

- "Yes - providing they could meet or exceed specification and given that we would not expose ourselves to risks."

  - IBM user

- Need to have total compatibility and credibility. Expect this would be an unlikely situation - too ideal."

  - IBM User

    - Hardware support
    - Credibility
    - Executive relationships
    - Price
  - And cash in on ICL's weakness, both real and perceived.

- Similarly, separate selling campaigns directed at IBM and Amdahl users should be organised and implemented emphasising the relative strengths of NAS, mentioned above, and the superiority over Amdahl and IBM as shown in Exhibit II-1.

- Prerequisites for further penetrating the IBM users include:
  - Getting to the decision makers (board and directors usually)
  - Getting and keeping their attention with:
    - NAS credibility
    - Better price etc.
    - Confidence
  - Stimulating their intellects through executive seminars and programs.

- It is important to note users' indications concerning being sold or persuaded to change large systems vendors, namely:
  - Better pricing
  - Compatibility
  - Reliability and availability assurance.

- Also, because of the highly regarded customer service rating for NAS, NAS should consider organising a TPM effort which would help it gets its foot in the door in some competitive accounts.

# APPENDIX 2: Executive Summary - France

# II. EXECUTIVE SUMMARY

## A. KEY CONCLUSIONS

- NAS has been adequately well received in the French marketplace, as shown in Exhibit II-1, being regarded best of all (IBM, Amdahl, Siemens, and BASF) in price and price performance, and holding joint second place in respect of compatibility. It exceeded target ratings in 12.5% of 24 main parameters.

  NAS was also rated better than:

  - IBM in 25% of the parameters
  - Amdahl in 21% of the parameters
  - BASF in 71% of the parameters
  - Siemens and NAS tied in 50% of cases, but surpassed Siemens in the following: price, performance/price ratio, compatibility, quality, environment, and consulting.

- Performance ratings were applied by specific users of that equipment e.g. IBM users rated IBM only on performance whereas perceptions, all users were free to rate all vendors.

- Despite product excellence, performance and reliability, compared to its major competitors, NAS does not compare so favourably with regard to support, and other factors which related to company attributes (overall communication capabilities, personnel interface, and particularly company stability, image and strength).

- Reflecting the lack of knowledge of non-NAS users about NAS and its products, in overall perception ratings, NAS only achieves third place regarding price, and product range capability, and gains fourth place with respect to company strength, credibility, personnel performance, and surprisingly also, product performance.

# EXHIBIT II-1

| NAS RATING | NAS | ALL | TARGET | IBM | SMS | AMD | BASF | ALL | TARGET | IBM | SMS | AMD | BASF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Price | 1 | 1 | x | x5 | x2 | x3 | x3 | - | - | - | - | - | - |
| Performance | 3 | - | no | x4 |  |  | x5 | - | x |  | x1 | x2 | - |
| Price/ performance | 1 | 1 | x | x5 | x2 | x3 | x4 | - | - | - | - | - | - |
| Compatability | 2 | - | - |  | x4 |  | x5 |  |  | x1 |  | equal |  |
| Upgradeability | 4 | - |  |  |  |  | x5 |  | x | x1 | x3 | x2 | - |
| Reliability | 3 |  |  | x4 |  | x4 |  |  |  |  | x1 |  | x2 |
| Availability | 4 |  |  | x5 |  | x |  |  | x |  | x1 | x2 | x2 |
| Quality | 4 |  |  |  | x5 |  |  |  |  | x3 |  | x2 | x2 |
| H/ware support | 3 |  |  |  | equal |  | x5 |  | x | x2 |  | x2 |  |
| S/ware support | 2 |  |  |  | x4 | x3 | x5 |  |  | x1 |  |  |  |
| Stability | 4 |  |  |  |  |  | x5 |  | x | x1 | x1 | x1 |  |
| Service organisation | 3 |  |  |  |  |  | x5 |  | x | x2 |  | x1 |  |
| Support personnel | 3 |  |  |  | x4 |  | x5 |  |  | x2 |  | x1 |  |
| System support | 3 |  |  |  | x4 |  | x5 |  |  | x1 |  | x2 |  |
| Communications | 4 |  |  |  |  |  |  |  |  | x1 | 3 | x1 | x3 |
| Reputation | 4 |  |  |  |  |  | x5 |  |  | x1 | x3 | x2 |  |
| Credibility | 4 |  |  |  |  |  |  |  |  | x1 |  | x1 | x3 |
| PERCEPTIONS |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Product range | 3 |  |  |  | 4 |  | 5 |  |  | 1 |  | 2 |  |
| Product performance | 4 |  |  |  |  |  | 5 |  |  | 1 | 3 | 2 |  |
| Product reliability | 2 |  |  |  | 4 | 3 | 5 |  |  | 1 |  |  |  |
| Price | 3 |  |  | 4 |  |  | 5 |  |  |  | 2 | 1 |  |
| Image | 3 |  |  |  | 4 |  | 5 |  |  | 1 | 2 | 2 |  |
| Strength | 4 |  |  |  |  |  | 5 |  |  | 1 | 2 | 3 |  |
| Personnel | 4 |  |  |  |  |  | 5 |  |  | 1 | 3 | 2 |  |
| % |  | 12.5 | 12.5 | 25 | 50 | 21 | 79 | 4 | 58 | 75 | 50 | 71 | 17 |

- As long term stability (both product and company) is very important to French company users, some attention must be paid to increasing user awareness of the company's existence and competence to rectify this situation.

- Loyalty by users is generally good (more so for sole IBM users), but all display a flexibility in considering other vendor quotes for new procurement - for a number of reasons, the main ones being:

  - cost and economic considerations
  - product comparison
  - more attractive and flexible commercial arrangements.

- It is generally very difficult for users to dissociate company from product loyalty as a multiple number of factors are considered when assessing DP acquisitions. IBM sole users tend to be more loyal for company attributes rather than product related attributes. Many are dissatisfied with the level of performance of the machines but compromise by being assured of security, generally high levels of support and good communications between user and supplier.

- Slightly more respondents are willing to change vendors than are not willing to change their existing vendors of large systems equipment.

  Reasons include:

  - cheaper product with same compatibility
  - proven superior product performance and reliability
  - a more cost effective and justified solution
  - "put pressure on IBM"
  - as long as a number of criteria were fulfilled
  - technical excellence, assured upgradeability and compatibility with existing systems.

- Those users unwilling to change were essentially fearful of basically moving into uncharted territory. Reasons stated include:

  - were already multisourced
  - unsure about the capabilities of PC suppliers, especially with regard to their credibility, capabilities and stability.
  - past experiences had ended in disaster (conversion cost, development, time, investment in personnel and equipment).
  - lack of supplier visibility and communication.
  - fears regarding MVS X.A. compatibility.
  - French users are more inclined to opt for IBM than Japanese suppliers for psychological reasons.

- NAS was praised by its users for the high performance and reliability of the product, excellent price/performance and good rapport with the company (new users).

- However disaffected NAS users are not so praiseworthy. One company stated that their current NAS product was nearly obsolescent and had had no communication with the company for over a year. Upgradeability was also a problem as the current NAS products were not directly upgradeable.

- Another NAS user said that although the company was good, the product range was currently inadequate, with no intermediate machines. It is apparent that the company is making admirable efforts to target and achieve sales, but that this effort is somewhat dissipated as soon as the sale has been met. Effort must therefore focus on increasing company visibility and maintaining continual interface with client users.

- IBM users were pleased with the level of service and communications provided by the company. The company scores highest of all in areas related to support, maintenance, general back-up and support services, company reputation (both actual and perceived) and overall communications.

- As borne out by respondents' comments, NAS products are rated very highly but the company falls short of expectations with regard to after sales service, support and communications.

- Also there are actual and perceived problems regarding the upgradeability capability of NAS current product range: non-NAS users who have reviewed NAS products into past also reiterate this fear and anxiety. The upgradeability path is still far simpler with IBM especially with the trend towards MVS X.A. currently developing on France.

- Although NAS users believe NAS hardware to be superior, IBM maintenance and support is still seen to be better. This in spite of the "disrespect" displayed regarding IBM's imperialistic attitude, arrogance, unethical business pressures, rigid contractual agreements, bureaucratic behaviour, and inflexibility.

- Candid remarks regarding what it would take to be sold and consideration of changing vendors from respondents are summarized in Exhibit II-2.

- In France, NAS suffers also from two major drawbacks - the physical presence of IBM and the fact that it is distributing a Japanese product.

    - One large user is purchasing IBM equipment, even though it costs 40% more than a comparable product.

- As IBM has manufacturing capabilities in France (producing CPU units in Montpellier) and thus is a provider

## EXHIBIT II-2

"What would it take for your company to be sold on another vendor?"

IBM User: "IBM would need to make serious errors; we would need convincing that the company could provide technical excellence and follow the mvs x.a. route; must assure good A.S.S. ADB and competent personnel."

IBM/AMDAHL User: "Cheaper product with same compatibility and reliability."

IBM/NAS/AMDAHL User: "Assurance that there were no risks, we've had bad experiences in the past with compatible suppliers."

IBM/NAS User: "There will always be a market for compatibles due to the economic climate. But we would demand true compatibility and an easy upgrade path."

IBM User: "Only interested in peripherals, not CPU, we buy second hand IBM equipment."

IBM User: "If guarantees for reliability, very good maintenance capability, price/performance ratio, are assured. However one CPU will always be IBM for reliability of service, performance. The 3083 enables upgrades to be done on client site, we need to protect our product investment."

NAS user: "NAS would have to disappear."

SIEMENS User: "We've been using compatibles since 1976. But we've had problems with NAS (product implementation and price - lack of intermediate product to suit our requirements)."

## EXHIBIT II-3

"Would you consider buying any future requirements from any supplier (IBM, Amdahl, NAS, Siemens, BASF) other than your own?"

IBM/NAS User: "No, due to inherent interface compatibility problems."

IBM/NAS/SIEMENS User: "If provided with a cost effective solution, with assured maintenance, and protected investment, then yes."

IBM User: "It's possible, but there is still an undeclared preference for IBM in this company (bank). Compatible suppliers tend to compete on price only and this is a far too simplistic approach, we are more sophisticated than that."

IBM User: "PC products may be better but we don't know whether they're going to be around in a couple of years. They lack strategy and definition of purpose."

IBM/AMDAHL User: "Certainly as long as the following are fulfilled, responds to technical specification, at a cheaper price than IBM with irreproachable continued service and support."

NAS User: "We are perfectly satisfied with NAS - so the answer is no ."

IBM User: "If it's a choice between IBM and the Japanese, then we'll stick with IBM."

IBM/NAS User: "Compatibles will always have an uphill battle. Credibility stability and reliability are all extremely important, IBM has all three. Even if compatible suppliers, surpass in some categories, they still cannot offer a total solution which is satisfactory to the client. The major problem with compatibles is software compatibility. Software is more important than the hardware. NAS machines are not directly upgradeable. IBM is."

AMDAHL/IBM User: "We didn't follow up the Hitachi/NAS option as we're fearful that there would be problems regarding the upgrade path."

AMDAHL/IBM User: "Yes - if IBM service and AMDAHL prices."

of employment, its activities are largely sanctioned by the French government. It has also become far more aggressive in its marketing and commercial activities in the national market, projecting itself as essentially a French company (which it is in the sense that it employs French nationals and is judicially autonomous from the US company) and fuelling the fears and doubts users may have regarding competitive equipment.

- Despite the fact that there are no indigenous compatible suppliers in France, French companies would still prefer, where possible, to purchase from a European supplier, or failing that from IBM France. Althogh it is known that Siemens, BASF, and Amdahl distribute Japanese equipment, the link is not perceived so strongly as the NAS/Hitachi option.

- Siemens is still seen as a European company with a solid reputation, reliable products, and good personnel. Although it has not had a very strong presence in France, the company is now developing strategies to penetrate the French market.

- Also Siemens and Amdahl have more flexible commercial arrangements than NAS.

- Some non NAS users say that the price is still too high and too much of a gamble.

## B. RECOMMENDATIONS

- Based upon users' commentary, ratings and perceptions, NAS should attempt more aggressive policies on several fronts.

    - It should capitalise on its actual and perceived strengths:

  - product performance
  - price
  - company references
  - hardware support
  - product reliability and compatibility.

- It should direct campaigns against IBM (highlighting weaknesses) and Amdahl in particular, embracing advertising campaigns, seminars, aggressive marketing, employing high calibre sales and marketing personnel.

- Campaigns should focus on convincing non users that compatibility and upgradeability are assured, as are also after sales service, and support. They also need to be convinced of the stability, strength, expertise, capabilities and product investment capability of the company.

- Some efforts should also be focused on maintaining close rapport with established NAS users, providing consulting services for DP company development, updates on products and strategies.

- Another area to counter is the generalised common policy of a fair number of French companies to acquire second hand IBM equipment through brokers or leasing companies.

- The company should adopt flexible commercial policies with their clients, to effectively compete with Amdahl and Siemens.

- The company must adopt the image of a French company and attempt to dissipate users' anxieties about the Japanese connection.

- As IBM has such powerful connections in the French government, some attempt should be made to acquire some presence within thse circles.

- Since IBM also has close connections with top management in large French concerns, NAS must also attempt to influence these decision makers (usually presidents of of companies) emphasizing the strong points of the company - better pricing, current user satisfaction, ease of use, less complexity than IBM.

- It is important to home in on user comments during the survey regarding their willingness to purchase from other vendors, notably,

  - a "total solution" approach
  - good personnel and executive relationships
  - flexibility on commercial arrangements
  - excellence in technical expertise
  - guaranteed compatibility and upgradeability
  - credibility, strength and image of the company.

# APPENDIX 3: Executive Summary - Germany

## II. EXECUTIVE SUMMARY

### A. KEY CONCLUSIONS

- The most striking point to emerge from the study is the difference between the poor market perception of NAS and the high ratings given to the company by its own users.
- NAS is regarded as being better than, or equal to IBM, Amdahl and Siemens in the three most important product criteria - reliability, compatibility and quality.
- Taking the 18 most important criteria, i.e. those rated at 8 or above on a scale of 1-10:
    - NAS were better than:
        - target in 67% of the criteria
        - IBM in 67% of the criteria
        - Siemens in 67% of the criteria
        - Amdahl in 50% of the criteria
        - BASF in 44% of the criteria
    - These ratings were given by users to their current vendor's equipment.
- The factors in which NAS are rated poorly are:
    - post sales effort
    - quality of systems support personnel
- Perceptions of NAS however are very different. NAS is seen by all users to be poorer than:
    - IBM in all aspects
    - Siemens in all aspects except performance and reliability
    - Amdahl in price, marketing strength and personnel quality

  - BASF in price and personnel quality.

- In the area of non-tangible company qualities, NAS has the poorest image of all the vendors.

- Loyalty is moderate for most vendors, with only IBM and NAS rating above 67%. Amdahl and BASF are particularly weak. Just over half the respondents assessed their loyalty as being 50-50 to the company and the product. Most other respondents expressed greater loyalty to the product.

- Most respondents expressed a willingness to consider changing vendors providing their compatibility can be maintained, price/performance and reliability be improved and risk minimised. 30% of respondents were unwilling to consider changing vendors.

- The most pleasing aspect about NAS to its users is the company's flexibility which was highlighted by all NAS users interviewed. Only NAS support quality was criticised.

  - IBM users were particularly pleased with the company's strength and skilled staff, but unhappy about cost.

- As far as products are concerned, 5 out of 6 NAS users highlighted reliability as a particular source of pleasure.

  - IBM was also rated highly on reliability.

## B. RECOMMENDATIONS

- It is clear from the analysis that NAS equipment is capable of outperforming any of its competitors, and stands up particularly well against Siemens. NAS should, therefore organise a selling campaign against Siemens.

- Prior to that campaign, however, NAS should take steps to correct its poor image in the German market. It's clear product strengths are not generally perceived by the market.

- NAS can capitalise on their product strengths against Siemens, being rated significantly better in:

  - performance
  - price/performancce
  - compatibility
  - upgradeability
  - quality

- Siemens has a particularly low loyalty factor - 3.3 on a scale of 1-6, and should therefore be vulnerable to the right approach. Siemens users interviewed would generally consider changing vendors to improve price/performance standards. Siemens users commented adversely on software quality, operating system support, and communication capability.

- There are two key areas where NAS were rated poorly which should be given attention:

  - quality of system support personnel

  - post sales effort

- On the defensive side, NAS is rated worse than Amdahl in a number of areas:

  - service organisation
  - post sales effort
  - systems support personnel
  - support personnel
  - software maintenance
  - hardware support
  - executive relationships

  NAS should address these areas, in particularly the service organisation to ensure that it does not lose sales to Amdahl.

- The only other area in which NAS is rated poorly is its communication with users.
- NAS superior product quality should allow it to organise sales campaigns against IBM and Amdahl as well as Siemens, but it is important that the overall image/perception problem is tackled first.
- As the DP manager is the person most involved in recommending new systems, he is the obvious target for an image-correction campaign.

# APPENDIX 4: Executive Summary - Italy

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## II. EXECUTIVE SUMMARY

### A. KEY CONCLUSIONS

- NAS has a considerable credibility gap in Italy. Actual users rate NAS generally more highly than IBM, Olivetti or Siemens users. The general perception of NAS is rather different, with NAS being more poorly regarded than both IBM and Olivetti.

- The most important purchasing factor mentioned is reliability. NAS performs badly in this element, rating below target, and poorer than Amdahl and Olivetti.

- Taking the 16 most important purchasing criteria, i.e. those rated at 7.5 or above on a scale of 1-10:

  - NAS was better than:

    . Target in 12 (75%) of the criteria
    . Amdahl in 4 (25%) of the criteria
    . IBM in 14 (87.5%) of the criteria
    . Olivetti in 11 (68.75%) of the criteria
    . Siemens in 12 (75%) of the criteria.

- NAS was rated best of all vendors in four of these key factors:

  - Software maintenance
  - Service organisation
  - Systems consultancy
  - Post sales effort.

- On the negative side, NAS is rated poorer than:

  . Amdahl in 10 (62.5%) of the criteria
  . IBM in 1 (6.25%) of the criteria
  . Olivetti in 2 (12.5%) of the criteria
  . Siemens in 1 (6.25%) of the criteria
  . Target in 4 (25%) of the criteria.

- The key factors in which NAS performs below target are:

- Reliability
- Price/performance
- Hardware support
- Quality.

Three of the above are rated in the top five most important criteria.

- From the above it can be seen that NAS is well thought of by its own users, generally more so than IBM, Olivetti or Siemens' own users. Only Amdahl enjoys better support from users. However, the fact that NAS users rate the company below target in the five most important criteria is cause for concern.

- Perceptions of NAS are different to the ratings of actual users. NAS is seen by all users to be:

  - Better than Amdahl in all respects - actual users rate Amdahl more highly than NAS.

  - Worse than IBM in all aspects except price.

  - Worse than Olivetti in all aspects except performance.

  - Better than Siemens in all product qualities, but poorer in company image and marketing strength.

- Loyalty is moderate for most vendors. Siemens rates perfect loyalty, but this is probably due to the limited sample size. IBM generates the next highest loyalty factor, (4.3 on a scale of 1-6), Amdahl 4.0, with NAS 3.9. Olivetti is the weakest even though it is the national producer.

  Experience is the most common reason for loyalty.

- Most users would consider changing vendors, mainly on cost and reliability grounds. External issues are virtually irrelevant in the purchasing decision. Those users unwilling to change vendors are concerned about the risks of changing, and possible support problems, particularly in a multi-vendor environment.

- The most pleasing aspects about NAS to its users are the good personal relationships established, flexibility and desire to please. Very few respondents felt strongly about NAS or its products.

## B. RECOMMENDATIONS

- The most comforting result of the survey for NAS is the fact that in general its users rate it more highly than either IBM's, Olivetti's or Siemens' own users. This can provide a starting point for a sales campaign.

- Siemens in particular seems very weak and vulnerable. NAS betters or at least equals Siemens' performance in every aspect except compatibility. Not only that, but in all practical areas NAS is perceived by all users to be superior to Siemans.

- NAS should be able to sell aggressively against Siemens. The key point is to demonstrate NAS compatibility at a practical level, and to take steps to improve the company's image and perceived marketing strength.

- A campaign to improve NAS's perception in the market place is important. The positive comments by the company's own users are not reflected in the overall view the market has of NAS. If these perceptions can be changed, then there is no reason why NAS should not also mount a campaign against Olivetti and IBM.

- There are two areas which demand immediate attention: reliability and price/performance. NAS should investigate its reliability record among users in Italy and examine ways of improving it.

- Overcoming these two problems will open up both Olivetti and IBM to attack. Olivetti has a much lower loyalty factor than IBM, so should be more vulnerable to a campaign. Nationalism does not play a major role in purchasing decisions, so should not prove a barrier.

- In setting up a campaign, besides countering the problems identified earlier, NAS must bear in mind the following points:

  - Olivetti

    - The users interviewed are very cost conscious. They specifically highlight lower prices, improved performance and a better price performance rating.
    - There is also a need for the supplier to provide a consultancy role to be user. This is one of NAS's strengths and should be built upon.
    - Olivetti have specific weaknesses in their support operation, again one of NAS's main strengths, and are weak in skilled staff.
    - The NAS attack should, therefore, aim to combat the adverse market perception of the company vis-a-vis Olivetti, to demonstrate its superiority in virtually all areas, particularly support and personnel; and try to overcome the adverse views about reliability and price/performance.

  - Siemens

    - The key weakness associated with Siemens is the 'old-fashioned' nature of the product. They are not regarded by Siemens users as state-of-the-art products, nor is the company itself considered to be a leader in technology.

- NAS must first counter the adverse compatibility image they have compared to Siemens, and then take action to improve their company image and demonstrate their strength in the market.

# APPENDIX 5: Executive Summary - Switzerland

## II. EXECUTIVE SUMMARY

### A. KEY CONCLUSIONS

- The three most important purchasing criteria identified by respondents were:
  - Realiability
  - Availability
  - Quality.

  In all three of these areas, NAS rated badly when compared to IBM, Amdahl and the 'target' set by users.

- Performance was also highlighted as being significant and again NAS rated poorly, being well below target (actual 8.0 against target 9.3) and worse than all other vendors.

- NAS is also rated worst of all vendors for post-sales effort.

- On the positive side, NAS is well regarded in a number of areas:
  - Compatibility
  - Upgradeability
  - Quality of salesmen
  - Price/performance.

- Respondents were asked for their perceptions of each vendor in seven key areas:
  - Product range
  - Product performance
  - Product reliability
  - Price
  - Company image
  - Marketing strength
  - Quality of personnel.

- NAS was rated behind IBM in all areas, and behind Amdahl in respect of product range, reliability, company image and marketing strength.

- NAS is rated well against both Siemens and BASF, except in the vital area of product reliability where NAS is perceived to be the worst of all vendors.

- Loyalty is moderate for all vendors in that respondents said that they would consider changing to another vendor. The key requirements for a change are: improved price/performance, improved service, improved cost effectiveness and the provision of a complete solution for users.

## B. RECOMMENDATIONS

- It is important in this market to recognise IBM's position. They are generally well regarded by their own users and again are extremely well perceived by the market in general. Amdahl, too, are well regarded.

- The two weaker vendors in relation to NAS are BASF and Siemens. As these two competitors are of limited significance compared to IBM, NAS must address their points of weakness relative to IBM.

- The three key areas of reliability, availability and quality should be checked, to ensure that performance matches that of IBM and Amdahl.

  Reliability in particular should be checked as not only is actual performance below target, but NAS equipment is perceived to be less reliable than that of all other manufacturers (Exhibit S3-33).

# APPENDIX 6: Executive Summary - Austria

# II. EXECUTIVE SUMMARY

## A. KEY CONCLUSIONS

- Although mainly loyal to their current supplier, most users will consider an alternative proposal. There was some conflict of motivation, with two users aiming to have two vendors' equipment on-site, while two others were firmly against a mixed environment.

- NAS's flexibility was particularly mentioned as a plus point. On the product side, only IBM's prices were specifically criticised.

- NAS product performance was rated highly. IBM, on the other hand, were badly rated for price and price/performance.

- In the area of support - software maintenance, systems consultancy and hardware support, NAS rated below target, but still performed better than IBM and BASF.

- As far as tangible company requirements are concerned NAS is rated below IBM in all areas except post-sales effort, and rated particularly badly for product range, company size and location.

- The market's perception of NAS is extremely variable, being good for product reliability,, product performance and product range. On the company factors of image and marketing strength, the perception is poor. Feelings are neutral about product range and personnel. NAS prices are also badly regarded.

## B. RECOMMENDATIONS

- In the absence of any one specific weak competitor NAS should concentrate its efforts on overcoming its weaknesses, both real and perceived, and targetting on the weaknesses of its competitors.

- The most significant area where NAS falls below user expectation is in support. In all three support activities, hardware support, software maintenance and system consultancy, there is room for improvement.

# APPENDIX 7: Executive Summary - Denmark

# II. EXECUTIVE SUMMARY

## A. KEY CONCLUSIONS

- The perception of NAS as a large systems supplier in Denmark is very good. (Perceptions are evaluations given by all respondents for each vendor regardless of which equipment they use). It is perceived to be better than Amdahl and IBM in 4 out of 7 key criteria:
  - Product performance
  - Price
  - Personnel
- Highest ratings were for product performance and product reliability. All rankings were "adequate" or better.
- NAS was rated in the middle in perceived market strength and product range.
- NAS' most negatively perceived criterion is its Company image.
- Actual ratings (where users rate their own vendors only) show NAS in the middle between Amdahl or IBM for:
  - Product range
  - Product performance
  - Price
- Only in Executive Relationships and support personnel (relating to perceived qualities of marketing strength and personnel, respectively) is NAS rated better by its users than either Amdahl or IBM users rate.
- Actual ratings which were worst included:
  - Image
  - Salesmen
- NAS' image suffers, according to 2 respondents, because it tends to spend more time fighting with IBM than trying to solve customers' problems.

- IBM has irritated at least 2 of the respondents seriously.
  - In one firm, IBM has a close contract with that firm at virtually every level, from the Board down to technicians.
    - When a problem occurs, IBM usually knows about it and is not afraid to bring it up the ladder on their side and report it to higher levels in the firm.
    - Furthermore, IBM is usually given a place on the task team to solve a major problem.
  - Another organisation has made it clear to IBM that their strategy is a 2 vendor strategy which has upset IBM (they want it all) to the point that IBM's support is beginning to degrade.

## B. RECOMMENDATIONS

- NAS should work on enhancing its image in Denmark. The thrust of this effort should take into account the perceived contention with IBM.
- The majority of respondents are committed to IBM but seem to embrace a two vendor philosophy, NAS should be reminded of this and set its targets accordingly.
- The apparent anomaly between perceived qualifications being better than actual ratings for the same issues warrants a specials customer satisfaction product to explore, determine and adjust the differences of views.